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On the Tempo and Mode of State Formation: Neoevolutionism Reconsidered

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The stepwise formulations of the neoevolutionists have come under critical attack in recent years. This paper considers the criticisms and suggests that the usefulness of neoevolutionism hinges to a large extent on whether such major developments as state emergence are better understood from a transformationalist or gradualist perspective. It is also argued that practitioners of neoevolutionism must acknowledge the importance of specific historical factors in cultural development. A modified neoevolutionist framework, transformationalist in character but also responsive to the cogent arguments of neoevolutionism's critics, is then developed and used to examine several cases of state formation in ethnohistorical and archaeological contexts. The interplay between theory and data demonstrates how the forces of history can be reconciled with those of function and development. © 1990 Academic Press, Inc.

It must simply be recognized that there are two different paths here—one toward the general and hence the comparative; the other toward the specific analysis of context and hence ultimately to the unique

Renfrew 1982:21

Of the many research problems which have attracted the attention of anthropologists, few have proved as enticing, enduring, and intractable as the evolution of states, those complex societies with centralized, bureaucratic governments that occasionally arise in a context of preexisting non-state societies. One aspect of this general problem will be the focus of my efforts here: the developmental cadence of state formation. Although many and diverse opinions surround this issue, two major positions can be identified. The first, which could be called the *transformationalist* (or *punctuationalist*) view, holds that, regardless of specific contextual differences among cases, the formation of states generally involves a profound and relatively rapid restructuring of administrative organization. According to this position, neoevolutionist concepts such as "chiefdom" and "state" are useful, if imperfect, attempts to characterize

such stepwise, qualitative change. The second major view, which we might label the *gradualist* (or *continualist*) position, maintains that political evolution is a continuous, essentially quantitative process. Scholars with this perspective tend to emphasize the differences between developmental sequences rather than the similarities and regard terms like chiefdom and state as artificial types imposed upon a phenomenon that is a continuum of complexity. In the present paper, I will take a stance on early state development that is transformationalist but at the same time appreciative of contextual variation.

BACKGROUND

The developmental schemes of neoevolutionism (Sahlins and Service 1960; Service 1962, 1975; Fried 1967) became, for a while, highly influential in archaeology. Data collected from various parts of the world were seen to reflect processes of development from simple to complex cultures, essentially in accordance with the Service-Fried frameworks (e.g., Sanders and Price 1968; Sanders and Marino 1970; Sanders 1974; Sanders et al. 1979; Wright 1969; Flannery 1972; Johnson 1973; Wright and Johnson 1975; Isbell and Schreiber 1978; *inter alia*).

This perspective, however, was never embraced by all and has increasingly become the target of a number of attacks, a major theme of which is that the neoevolutionist frameworks do not adequately allow for processual continuity. Lewis (1968), for example, called the Service view "typological" and argued that "typologies are static by their nature and cannot yield productive insights into matters of process and development" (1968:101). The assumption of gradualism underlying Lewis's position is clear: "evolution generally proceeds through a continuous process of development rather than through a succession of discontinuous movements from stage to stage" (Lewis 1968:103). Kottak's refutation of the stepwise evolutionary perspective is also founded on a continuous view of cultural complexity.

A major problem in studying the process of state formation is precisely the typological approach . . . I argue that a more processual, realistic, and useful comparative and evolutionary view of sociopolitical organization places empirical societies along a continuum rather than in generalized categories (Kottak 1977:137).

Other writers have objected to what they see as the assumption of directional change embodied in the neoevolutionary stance (Dunnell 1980; Wenke 1981; Rindos 1984, 1985; Blanton et al. 1981). Dunnell asserts that neoevolutionism in anthropology is the intellectual descendant of the transformational, progressive philosophy of Herbert Spencer and not the selectionist position of Charles Darwin, which Dunnell considers a better

model for evolutionary studies in anthropology (1980:40). If one accepts selection as the primary mechanism of cultural change, says Dunnell, then directionality can play no part in theories of cultural evolution: "Because of natural selection, evolution cannot be 'progressive'; it is adaptive and wholly opportunistic" (1980:42). Blanton et al. draw a similarly close analogy when they aver that "cultural evolution, like biological evolution, probably moves opportunistically, solving only today's problems, proceeding rather blindly, without predetermined course, into the future. . . . In addition, we know that neither biological nor cultural evolution proceeds *necessarily* from the simple to the complex" (1981:13, emphasis in original).

Others have criticized neoevolutionism for neglecting the important role of history in shaping the trajectories of cultural development (Legros 1977; Yoffee 1979; Hodder 1982, 1986; Kohl 1984; Kirch and Green 1987; Friedman 1987). Hodder (1982), for example, disparages the neoevolutionist concern with cross-cultural analysis, arguing that this leads to a reduction of empirical variability to analytical sameness and, ultimately, to a neglect of how specific historical factors may have affected developmental sequences. He asserts that strictly historical explanations are legitimate in that "the cultural framework within which we act, and which we reproduce in our actions, is historically derived, and that each culture is a particular historical product. The uniqueness of cultures and historical sequences must be recognized" (Hodder 1982:4-5).

This disregard for history, says Kohl, has led to an overemphasis by some archaeologists on gradual, smoothly unfolding evolutionary processes: "The fact is that even a cursory examination of any historical sequence cannot overlook the effects of sudden, decisive events, particularly the coming together or conjuncture of separately evolving historical trajectories. There clearly exist historical periods . . . notable for accelerated development or collapse" (Kohl 1984:130). In a similar vein, R. M. Adams has suggested there is a "need for a less 'gradualist' orientation . . . in the evolutionary study of early ranked and stratified societies" (1974:249).

While it seems obvious that the stepwise frameworks of neoevolutionism ought to be based on a nongradualist view of cultural development, incongruities are readily found in the literature. For example, even a writer as closely identified with neoevolutionism as Harris reveals a gradualist bias when he notes: "While only a fine line separates advanced chiefdoms from pristine states, the change-over is best described not as a qualitative leap or flip from one form to another but as the continuation of an exponential process of deviation amplification" (Harris 1979:101). If this were true, one could reasonably question the utility of making the distinction between chiefdoms and states in the first place. And Claessen,

whose model of the early state (1978) is clearly neoevolutionist in character, undermines his own position by pleading: "Though the evolution of sociopolitical organization is a continuous series of processes in the course of which one form more or less gradually develops out of another, it still seems possible to classify sociopolitical phenomena in terms of stabilized forms" (1984:365).

Where does this leave neoevolutionism as we near the end of the 1980s? Kohl sounds the death knell, declaring that "today, neo-evolutionary accounts have held sway long enough" (1984:129). As an archaeologist I cannot accept this pronouncement, because I have found that a basic evolutionary view of cultural development—as "descent with modification"—is indispensable when analyzing prehistoric cultural sequences. On the other hand, a strict adherence to the Service-Fried frameworks of the 1960s would require one to ignore the valid arguments made by some of neoevolutionism's critics. What seems to be called for is a modified neoevolutionism which takes these criticisms into account.

REGULATORY PROCESSES IN EVOLUTIONARY PERSPECTIVE

The framework to be developed here is a conscious hybrid, drawing upon ideas not only from neoevolutionary anthropology, but also from systems theory, evolutionary ecology, and historical-materialist theory. As an initial assumption, I submit that it is useful to view human cultural organization as a form of living system (see, for example, Miller 1965a, 1965b, 1965c, 1978; R. N. Adams 1988; Flannery 1968, 1972, 1986; Braun and Plog 1982; Rappaport 1984, Spencer 1982). One pertinent feature of living systems is their hierarchical organization, with each level of a system composed of discrete components (themselves systems of a lower level) which are bound together through the operation of subsystems (Miller 1965a:212-219; 1965b:338). Moreover, I accept Flannery's (1972) assertion that a salient trend in the development of civilization has been an increase in the complexity of decision-making or regulatory subsystems and a concomitant increase in their capacity for information processing (see also Wright 1969; Rappaport 1971; Johnson 1973, 1978, 1982; Wright and Johnson 1975). Yet, we must also recognize that organization has a cost (D'Altroy and Earle 1985). Living systems counteract entropy by extracting energy from their environments; they are thus examples of what Prigogine and his colleagues call "dissipative structures," those which must maintain their organizational complexity through the continual dissipation of energy (Prigogine et al. 1977; Nicolis and Prigogine 1977; R. N. Adams 1988:21-24).

A further assumption is that living systems are subject to the forces of selection. If a living system is to reproduce itself, perpetuating its orga-

nization over time, it must pursue strategies that are compatible with both its internal structure and its environment, avoiding those that are suboptimal (R. N. Adams 1988:120–142; Lewontin 1970; Dunnell 1980). It is important to recognize that a system may exhibit a variety of behaviors at a given point in time, all of which are subject to selection. Evolution entails the differential preservation of this variability as the system reproduces itself, and can result in increases or decreases in the size or complexity of the system (Dunnell 1980; Blanton et al. 1981:13; Spencer 1987).

But we should also acknowledge that, while cultural evolution and biological evolution both involve “descent with modification” mediated largely by selection, the two processes are not identical. This is because cultural evolution, unlike its biological counterpart, is characterized by the “Lamarckian” mechanisms of directed variation and inheritance of acquired characteristics (Boyd and Richerson 1985:81–131; Gould 1980a:84; Stanley 1981:204–205). The first of these results from the operation of human decision-making strategies, and the second from the human capacity for enculturation. In cultural evolution, behavioral variability is not generated randomly by mechanisms analogous to genetic mutation and recombination (cf. Rindos 1984, 1985). Instead, individuals and groups of individuals (factions or classes) pursue strategies that they assume will further their own interests. It is worth pointing out that (1) conflicting strategies may be pursued by different individuals or social groups in the same society; and (2) not all of the feasible strategies in a given situation will be equally optimal from the actors’ points of view. Thus, an analysis of cultural evolutionary change requires us to recognize the importance of such “Marxian” factors as political competition, class struggle, and power seeking, not only in regard to the generation of variability but also in view of the consequences of selection for the various individuals and groups involved (Brumfiel 1983; Brumfiel and Earle 1987; Cowgill 1975; Friedman 1975; Friedman and Rowlands 1978; Gailey and Patterson 1987; Haas 1981; Spencer 1979; Spriggs 1984). Underlying this statement, of course, is the assumption that selection operates hierarchically, affecting both individuals and social units (Lewontin 1970; Vrba and Eldredge 1984; Grene 1987). In the evolutionary arena, the ultimate test of a given strategy is how well it facilitates the reproduction of a structure of social, political, and economic relationships favorable to the individual or group pursuing this strategy (Mandel 1968:305–341; Friedman 1975:161–165).

As an additional assumption, I accept that historical processes must be seen as playing a crucial role in shaping the developmental trajectory of an evolving system (Kirch and Green 1987:432). It is history which provides the contextual variation within which and upon which selection

operates. "History is fundamentally important in terms of the specific contexts of and opportunities for cultural change" (Earle and Pruecel 1987:509).

Yet *strictly* historical explanations (Hodder 1982, 1986; Kohl 1984; Friedman 1987), I contend, cannot fully account for cultural evolutionary development. Historical and contextual variation must be reconciled with convergent developmental processes (Kirch and Green 1987). Making a similar point, Gould (1985, 1986) argues for the central role of historical relationships (homologies) in evolution, but he also entreats us to recognize the importance of independently evolved similarities (analogies) when our research focuses on function and development.

The historical flow of protoplasm through branching systems of genealogy is the material reality that structures biology. But analogies have a different (and vital) meaning that the resolution of history finally permits us to appreciate. They are functional themes that stand, almost like a set of Platonic forms, in a domain for biomechanics, functional morphology, and an entire set of nonhistorical disciplines. "Wrenness," "mouseness," and "wormness" . . . represent iterated themes, standards of design external to history. The material reality of history—phylogeny—flows through them again and again, forming a set of contrasts that define the fascination of biology: homology and analogy, history and immanence, movement and stability (Gould 1986:68).

A kindred argument is presented by Frazzetta, who notes that historical variability has been constrained by selection to a limited number of basic designs or Bauplane: "a relatively meager number of fundamental patterns underlie a great animal diversity" (Frazzetta 1975:237). In the realm of human sociopolitical organization, I submit that there is also a limited array of basic designs underlying the apparently wide range of variability (Spencer 1987). This has been recognized to a greater or lesser degree by many generations of anthropologists, and it is this relatively small number of "sociopolitical Bauplane," I suggest, that the neoevolutionists have sought to characterize with their stepwise, qualitative formulations. In the paragraphs that follow, I will describe two of these, the chiefdom and the state, and then discuss how the latter can, under certain conditions, evolve from the former.

According to Henry Wright (1977), chiefdoms are societies with centralized but not internally specialized administrative organizations.

A chiefdom can be recognized as a cultural development whose central decision-making activity is differentiated from, though it ultimately regulates, decision-making regarding local production and local social processes; but it is not itself internally differentiated. It is thus externally but not internally specialized (1977:381)

With minimal internal differentiation of authority, any delegation in a chiefdom approaches total delegation, a situation ripe with potential for

usurpation (Wright 1977:381). Optimally, a chief should avoid delegating authority, which means that he has to manage his domain from the center (Spencer 1987:375). This, in turn, implies that there is a spatial limit to the territory that a regional chief can effectively rule; I have suggested that in a preindustrial context the optimal territory size for a single paramount chief's domain would be one with a radius no larger than about one-half day of travel from the regional center (Spencer 1982:6-7, 1987:375). As a rough estimate, for a territory of circular shape, and a walking speed of 5.6 km (3.5 miles) per hour over a 10-hour day, this would be a maximal domain with a diameter of 56 km (35 miles) and an area of 2463 km² (962 square miles).

Empirical support for this expectation can be drawn from the literature. Cohen and Schlegel (1968:136) analyzed a sample of 36 societies and discovered that the 10 indisputable "chieftaincies" in their sample had territory sizes ranging from 128 to 1024 km² (50 to 400 square miles). Helms (1979:51-53) found that the distance between regional paramount chiefdom centers in ancient Panama was 26 to 35 km (16 to 22 miles). The territory of the largest Mende chiefdom of Sierra Leone, Luawa, was about 27 km (17 miles) in diameter (Little 1967:240).

Another regulatory strategy compatible with a chiefly administrative context is one in which a regional chief concentrates on financing his establishment through surplus mobilization and coordinating activities pertaining to the region as a whole, while at the same time encouraging communities to regulate their own local affairs with little interference from him (Peebles and Kus 1977:432; Wright 1977:381). This view departs from some earlier models of chiefly organization which regarded organic solidarity as the key integrative mechanism in chiefdoms (Service 1962:144-152, 1975:75-79; Fried 1967:116-118). In a study of 25 chiefdoms in central and eastern Africa, Taylor (1975) found a notable lack of organic solidarity. Instead, she concluded that "local groups tend to be very largely self-sufficient" and that chiefly organization in her sample "is not typically characterized by the central coordination of the specialized activities of unlike parts of the whole" (1975:35). Similarly, in the Halelea district of Kaua'i, Earle (1978) found that the "social and economic organization of Halelea commoners was based on principles of self-sufficiency at both the household and community level" (1978:158).

Clear distinctions can be drawn between chiefdoms and states.¹ In

¹ The contrasts between the central administrative organizations of chiefdoms and states are manifested linguistically. In Spencer (1987:372) I consider the labels used by various ethnohistorically known chiefdoms and states to characterize central administrative functions and roles. The chiefdoms evidence very few distinct titles, befitting the generalized nature of chiefly authority; by contrast, even relatively "small" states have a strikingly diverse array of official titles in their administrative organizations.

states, not only is administrative authority centralized, but it is also internally differentiated into separate components, each of which performs part of the overall central administrative task.

A state can be recognized as a cultural development with a centralized decision-making process which is both externally specialized with regard to the local processes which it regulates, and internally specialized in that the central process is divisible into separate activities which can be performed at different places at different times (Wright 1977:383).

Different decisions (and different kinds of decisions) relating to central administration can be made by different specialized components in a state. In order to coordinate decision-making activities, specialized components may be organized hierarchically into echelons (Miller 1965a:217). Components in the higher echelons tend to be concerned with policy, while those in the lower echelons are ordinarily involved with more specific decision-making activities.

The internally differentiated administration of a state is compatible with the effective delegation of partial authority. This means that a state ruler can permanently dispatch specialized administrative officials to locations other than the regional capital in order to manage local social and productive processes. Moreover, if the authority of the dispatched official has been defined narrowly enough, this can be done with minimal fear of usurpation. This capacity to delegate central authority greatly increases the effectiveness with which local stresses and imbalances in the system can be handled. On the other hand, administrative organizations with considerable delegated authority are much more expensive than are ones with simple centralized authority, because of the greater communication and transportation costs entailed in coordinating local and central administrative components.

At the same time, a state administration, if effectively managed, can finance itself with a wide array of political-economic techniques (D'Altroy and Earle 1985). Delegation permits the direct administration of local production by members of the state bureaucracy. Production goals, labor quotas, work schedules, and rates of taxation can be determined by policy-makers at the state capital and then implemented by specialized administrators throughout the territory. The state may also create specialized institutions such as a police force, a judicial branch, or a standing army to back up its policies with coercive action if necessary (Fried 1967:235-240; Johnson 1973:4).

The optimal regulatory strategies of a state ruler will differ in a fundamental way from those of a paramount chief because of the contrasting principles which define the decision-making structures of each. While a paramount chief should avoid delegating central authority, the optimal

strategy of the state ruler will be the reverse: to divide and segment authority as much as possible so as to minimize the probability of usurpation (Wright 1977:383). Such a strategy may include the fostering of economic specialization and concomitant interdependence among component communities, which encourages organic solidarity and undermines the autonomy of local leaders.

The contrasts drawn between the administrative structures of chiefdoms and states lead to another expectation: that a state has the capacity to integrate a much larger territory than a chiefdom. Extending central control to areas far from the center usually requires the establishment of secondary outposts of administration, and the state's ability to delegate authority permanently is consistent with such a strategy. The state is thus able to overcome the spatial limits to regulatory efficacy that are a consequence of chiefly administrative principles.

To illustrate, consider the West African state of Maradi, which extended over a territory of some 213×40 km, or more than 8000 km^2 (Smith 1967). The central administration of this large system was characterized by considerable internal differentiation. "Excluding twenty-two titled princes, nine princesses, and nine titled wives and concubines of the ruler, the state of Maradi contained over 130 titled offices" (Smith 1967:104).

Another West African state, Dahomey, covered an even larger area— 120×205 km, more than $24,000 \text{ km}^2$ —and its administration was marked by even greater internal specialization.

The centralization of political activity at the capital required a highly specialized administration. . . . Most government business was dealt with by ministers and officials with well-defined functions, although they were not permitted to make final decisions on major questions without royal consent. According to Forbes, who visited the capital in the middle of the nineteenth century, the royal retinue consisted of 296 nobles. In effect, however, most power was concentrated in the hands of six high-ranking ministers whose functions were considerably varied (Lombard 1967:81)

Such a marked degree of administrative specialization allowed the Dahomean king to engage in effective delegation of authority and intervene directly into most aspects of everyday life (Lombard 1967:79). Local leaders enjoyed little autonomy in Dahomey, acting instead as virtual royal agents. They were responsible for public order in their localities, the collection of taxes, the filling of military quotas, the repairing of national highways, and so forth (Lombard 1967:76). A full-time army of 12,000 soldiers was also maintained by the Dahomey state (Lombard 1967:86).

The difference in territory size between chiefdoms and states is underscored by Cohen and Schlegel (1968). After comparing the 15,000 square mile ($38,400 \text{ km}^2$) territory of the Bemba state with the vastly smaller (less

than 1100 km²) domains of the chiefdoms in their sample, they concluded that "area size might not only distinguish non-chief from chief societies, but separate these two 'types' from state societies as well" (Cohen and Schlegel 1968:138).

FROM CHIEFDOM TO STATE: A REGULATORY TRANSFORMATION

It is not my view that chiefdoms inevitably evolve into states. To the contrary, a majority of historical and archaeological chiefdoms seem to have undergone cycle upon cycle of political growth (usually involving population growth and an increase in chiefly wealth and power) followed by decline, without developing a state administration. This dynamic capacity would appear to account for the wide range of variation among chiefdoms over time and space noted by some researchers (Sahlins 1958; Goldman 1970; Taylor 1975; Steponaitis 1981; Carneiro 1981; Feinman and Neitzel 1984; Drennan and Uribe 1987; Earle 1987). But, when states *do* emerge, particularly in a pristine fashion (Fried 1967:231–235), I would expect their evolutionary precursors to be chiefdoms; before an administration can be centralized and also internally specialized, it must first be centralized. Under what conditions might we expect to see the evolution of chiefdoms into states? And, should we expect the tempo of such a development to be gradual or punctuational?

I contend that a chiefly administration would have little incentive to adopt the more costly regulatory practices of statehood as long as it is able to regulate the critical variables of the system and provide sufficient funding for its own support through effective management of the political economy of its domain. In making this statement, I am assuming that the optimal strategy for decision makers is to minimize expenditures relative to a particular regulatory strategy and their own political goals. On the other hand, we might expect an attempt to establish a state form of administration when and if the elite find it advantageous to alter their regulatory strategies in order to sustain the social formation and thereby nurture their own power (Spencer 1982:11–12; Wright 1986:358). It is worth noting that such a threshold could develop as a consequence of political growth in a chiefdom. Let us consider how this might happen.

The funding of chiefly political growth usually calls for increases in surplus mobilization. As aptly put by Sahlins, there are basically two strategic alternatives available to the leadership: "getting people to work more or more people to work" (1972:82). Since the first strategy harbors the disadvantage of requiring the leadership to intervene directly into the daily work habits of individual households and villages, it is the second that is usually more compatible with the structure of chiefly authority. Getting more people to work, of course, essentially means getting more

people. The leadership can foster both immigration and regional population growth, thus increasing the labor supply and potential surplus output (Blanton 1975; Spencer 1982:44–48). This process of political growth, however, has finite limits, because surplus production can be increased most readily only within the spatial bounds of chiefly regulatory efficacy. When these limits are approached, it will become increasingly difficult to sustain the pace of political growth, engendering a stressful condition between the demands of the elite, the fundamental needs of the people, and the system's productive base. If the condition cannot be resolved, a political decline could well ensue (Friedman 1975:186–193).

One possible strategic response to such a situation would be for the leadership to seek to enlarge the political economic territory by incorporating villages that lie well beyond the limits of chiefly regulatory efficacy. Another would be for the leadership to intervene directly into basic productive activities in its domain, altering patterns of work and extracting surplus as a direct tax. It is important to recognize that either strategy, to be successful over the long run, would require considerable delegation of central authority, which in turn would demand an increase in internal administrative specialization.

If internal administration specialization is chosen as a strategic option, and central authority is to be divided into parcels and shared with associates, it will behoove the leadership to make the change quickly and extensively, segmenting the shared authority as much as possible. This will help ensure that the parcels of authority are defined narrowly enough so that no single administrative assistant in the new structure enjoys sufficient authority to engage in political usurpation. The alternative, dividing the shared authority into just a few broadly defined segments, carries with it a higher risk of usurpation and would thus be a suboptimal strategy, detracting from the overall "fitness" of the social formation and lowering the probability of social reproduction. I therefore join Wright (1977, 1986) in proposing that a *successful* transition from chiefdom to state will be most likely to occur in a transformational or punctuational—not gradual—fashion.

This proposition can be related to the "punctuated equilibria" view of macroevolution currently held by some evolutionary biologists (Gould and Eldredge 1977; Gould 1980b; Stanley 1979, 1981; Frazzetta 1975). More specifically, we could regard the political Bauplane of chiefdom and state as representing two "fitness optima" in an adaptive landscape, a conception analogous to the evolutionary model proposed some time ago by Sewall Wright (1931a, 1931b). Although a range of behaviors is possible, not all are equally optimal, and strategies that adhere closely to the fitness optima are more likely to lead to successful reproduction than those which do not (Lewin 1986). This view expects a transition from one

fitness optimum to another on the adaptive landscape to come about in a very rapid, or punctuational, manner (Newman et al. 1985).

It is useful to examine some ethnohistorically known cases where attempts were made to establish internally specialized central administrations, with varying records of failure and success. The first example, Tonga, is a Polynesian archipelago with just three islands of notable size: Tongatabu (256 km²), Vavau (118 km²), and Haapai (51 km²), which are distributed over an expanse of ocean some 192 km across (Goldman 1970:279-281). The genealogical traditions concerning the paramount chiefs of Tonga pay considerable attention to the *Tui Tonga* dynasty, which began in about 950 A.D. (Goldman 1970:282). The first Tui Tonga was said to have been *Ahoeitu*, who was held to be the offspring of *Tangaroa* (the Sky-God, the central Tongan deity) and a Tongan woman. It is said that Ahoeitu was sent down from the sky with his half-brothers to rule Tonga; he became the paramount chief, while his half-brothers became village chiefs.

The first 10 Tui Tonga paramounts ruled in apparent peace, and are said to have become wealthy and powerful. But with the eleventh, *Tui Tonga Tuitatui*, we see the first signs of serious internal strife. This paramount's name means "Lord-who-strikes-the-knee," which the traditions say refers to his habit of striking people who came too close to him, such was his fear of assassination. The eleventh Tui Tonga never was assassinated, but the nineteenth, twenty-second, and twenty-third Tui Tongas were. Around this time, after 1400, Tongan dynastic history is marked by tales of violence and instability. Then, the twenty-fourth paramount, *Tui Tonga Takalaua*, made an attempt to alter the nature of Tongan administrative organization. He endeavored to bring all the Tongan islands under his direct political control, and he tried to establish a dependent colony (also under his control) on the distant island of Futuna. In line with the earlier discussion, we would expect that effective domination over such a large territory would have required that Tui Tonga Takalaua be able to divide and delegate aspects of central authority to administrative assistants that he could then dispatch to remote parts of the realm. In this light, it is notable that Tui Tonga Takalaua was apparently the first Tongan paramount to attempt an internal differentiation of central authority. He created a new title, the *Tui Haa Takalaua*, and a new lineage for determining succession to that office. He planned to retain the religious aspects of central authority for himself and to delegate secular powers to the new official, who was supposed to occupy a position of lower overall authority. We could, however, question the "fitness" of this strategy for promoting the long-term political interests of the Tui Tongas. We might expect that such a limited implementation of internal differentiation of authority would result in rather broadly defined parcels of shared author-

ity, thereby enhancing the probability of usurpation against the Tui Tonga elite. This is precisely what happened.

The lower overcame the higher. The office of the Tui Haa Takalaua became the powerful one, and the traditions no longer dwell on the history of the Tui Tongas. They are left behind as volumpuaries, enjoying indolence, good food, and beautiful women (Goldman 1970:284).

Thus, one chiefly leadership was replaced by another, and an internally specialized administration was not successfully established.

In 1610 there was another attempt to develop internal administrative specialization on Tonga. The Tui Haa Takalaua at that time also decided to split central authority into sacred and secular components, and created a new office, the *Tui Kanokupolu*, along with a corresponding Kanokupolu lineage. Although the new official was supposed to be of lesser administrative importance, the two rulers immediately became embroiled in a rivalry for supreme power. The Kanokupolu line got the upper hand and replaced the Takalaua lineage as the paramount leadership.

The Tui Haa Takalaua had declined in power even more rapidly than the Tui Tonga and so fell an easy prey to the grasping Tui Kanokupolu. The similarity of functions of the two offices made the absorption the easier (Gifford 1929:29; in Goldman 1970:284).

Once again, because central authority was differentiated to only a small extent, the attempt to implement a new regulatory strategy foundered on the rocks of political usurpation.

Let us now consider a case where the implementation of internal administrative specialization was more successful: the Hawaiian Islands (Goldman 1970:199-242). The large island of Hawaii covers some 10,000 km²; four other major islands are scattered across 670 km of ocean. The genealogical traditions here concern the *Kamehameha* family, who were ascendant at the time of European contact in the late eighteenth century A.D. The political fortunes of Kamehameha I, of course, are fairly well known. He was befriended by European traders who offered him firearms and political advice. This assistance helped Kamehameha I overcome all opposition and establish by 1810 a central authority over not only the island of Hawaii but most of the other large islands of the chain as well.

Kamehameha's administration was characterized by definite internal specialization and delegated decision making. In contrast to Tonga, where members of the high chief's retinue were referred to generically as *mata-pule*, on Hawaii there were many specific titles that denoted specialized administrative functions and roles: "The administration consisted of a chief counselor, a chief priest, a war leader, a council of military strategists, common warriors, historians, and readers of omens" (Kepelino in Beckwith 1932:124ff; in Goldman 1970:224). Moreover, to manage each

island under his dominion, Kamehameha appointed an island administrator, the *kalai-moku*, who had clearly delegated duties and was assisted by subordinates known as *konohiki*.

The *kalai-moku* was responsible to the paramount chief for the collection of tribute and for the proper management of farms, irrigation works, fish ponds, and fishing. He supervised a corps of *konohiki*, or local overseers, who were lower *ali'i* (elite people) by rank and subordinate officials by office. Since district chiefs were also land administrators by right of rank, the Hawaiian administration was divided between the traditional sources of rule and the technical. . . . In the reign of Kamehameha I, the *konohiki* had already achieved the ascendancy (Goldman 1970:224).

Such features as the diversified central administration and the delegation of partial authority to the *kalai-moku*, and then to the various *konohiki*, make it clear that the administration of Kamehameha I should be regarded as a state.

But Kamehameha I was not the first paramount to implement internally specialized authority on Hawaii. An earlier attempt appears to have occurred toward the end of the Fourth Epoch (1100–1450 A.D.), during the reign of *Umi-a-Liloa*. At this time, there had emerged the office of paramount chief over the entire island of Hawaii: the *ka-moi* or "supreme chief" (Goldman 1970:205). When *Umi-a-Liloa* became *ka-moi*, he carried out some significant administrative innovations. He is reported to have divided the island into six great districts, each of which he allocated to a lesser chief who was an ally. He is also credited with implementing a policy of widespread functional differentiation of administrative, military, and economic tasks.

Umi-a-Liloa set the laborers in order and separated those who held positions in the government. He separated the chiefs, the priesthood, the astrologers and the skillful in the land. He separated the cultivators and the fishermen, and the canoe hewers. He set apart the warriors, the spear-warders, and every department with proficiency, and every laborer in their respective lines of work. So with the governors, district superintendents, division overseers and section wardens; they were all set in order (Fornander 1916–1917:IV,228; in Goldman 1970:208).

The reign of *Umi-a-Liloa* is remembered in the accounts as a time of peace and order. But, upon his death he was succeeded by his eldest son, who was apparently not as able a ruler; the administrative structure built by *Umi-a-Liloa* disintegrated and there was a return to the strife and political instability that had characterized earlier times (Goldman 1970:208). Not until the time of Kamehameha I was internal administrative specialization implemented in Hawaii with lasting effect.

In Hawaii, therefore, the two episodes of state emergence took place so rapidly that we can identify a single ruler responsible for each administrative transformation. Moreover, in each episode central authority was

quickly divided into many narrowly defined parcels, yielding a government that was highly differentiated internally. Finally, in Hawaii we also see how historical factors, such as the personal characteristics of specific leaders and European contacts, can contribute importantly to the success or failure of administrative transformations, and thus help to shape the trajectory of cultural evolution.

STATE FORMATION IN ARCHAEOLOGICAL CONTEXT: TWO CASES

Many of the examples of truly primary or pristine state formation occurred before adequate written records were kept and can be known only through archaeology.² Let us now turn to two examples of primary state formation in early Mesoamerica: Monte Albán and Teotihuacan. In both cases, we will see that state formation is manifested by a dramatic increase in the amount and variety of administrative facilities (or "public buildings") involved in the central decision-making organization of the system (Flannery and Marcus 1976; Sanders 1974; Spencer 1979, 1982, 1987). On the other hand, it will also be clear that the historical contexts of the two cases were quite different.

The Monte Albán State

The early Zapotec state had for its capital the famous hilltop site of Monte Albán, situated at virtually the geographic center of the triple-armed Valley of Oaxaca in Mexico. Monte Albán was first occupied at the beginning of Period Early I (500–300 B.C.). During Period Early I, the site had a population of about 5000 people distributed around two public buildings, one of which was decorated with carved stones depicting naked, lifeless male figures—the *Danzantes* (Blanton 1978:35; Blanton et al. 1981:69; Acosta 1965:814–817; Caso et al. 1967:95–96). As an aside, I should note that some archaeologists have suggested that a third building on the plaza beneath Mound K may also date to Period I, but in his definitive report Jorge Acosta (1965:820) clearly assigned this building to

² "Archaeologically, I would expect the differences between chiefdoms and states to be manifested most clearly in the realm of *administrative technology*. Administrative facilities, in particular, should reflect by their size, form, and functional context the importance and variety of the decision-making activities with which they are associated. . . . [We] would expect to find much more morphological and functional variety in administrative facilities [in a state] than we would expect to see in the paramount center of a chiefdom. This greater variety reflects the appearance of new institutions, offices, and roles in the central decision-making organization" (Spencer 1987:372–373, emphasis in original).

the later Period II, when the plaza experienced a building boom of unprecedented proportions.

In the earlier Rosario phase (700–500 B.C.), the largest settlement in the Oaxaca Valley was San José Mogote, in the northeastern or Etla branch, which had an estimated population of 1000 people (Flannery et al. 1981:77–78). Despite its smaller overall size, San José Mogote in Rosario phase resembled Period Early I Monte Albán in that it apparently also contained two public buildings, associated with a stone carved in the *Danzantes* style (Flannery et al. 1981:78–80).

Most researchers agree that the Oaxaca Valley during the Rosario phase was organized along chiefly lines (Blanton et al. 1981:63–66; Wright 1977:390; Flannery et al. 1981:87). It would seem that chiefly decision-making principles continued to be the rule in Period Early I (Spencer 1982:17–19). In both phases, regional administrative facilities were evidently concentrated in the largest center, but they show little internal differentiation in terms of morphology or presumed function. Nevertheless, the establishment of the Period Early I center at Monte Albán did represent an important political development in the valley. It marked a shift in the locus of regional decision making away from San José Mogote in the northeastern branch to a location that was more central to the valley as a whole. Elsewhere I have shown how this would have reduced the relative transport costs of mobilizing surplus for the support of the regional elite, as well as the costs of disseminating administrative information from the regional capital throughout the valley (Spencer 1982:19–22). Monte Albán's impressive hilltop location would also have provided the Zapotec elite with an important *ideological* advantage that could have helped to reinforce their regional authority (Spencer 1982:23). Moreover, if the leadership was involved in warfare, a definite possibility given the interpretation of the *Danzantes* carvings as slain captives (Marcus 1980), the defensive advantage of the hilltop setting may have been an important consideration. Such administrative, political-economic, ideologic, and military benefits were probably significant factors in the growth of Monte Albán to five times the size of the earlier center of San José Mogote. The transition from Rosario phase to Period Early I certainly represents considerable political growth in the Oaxaca Valley, but within a chiefly administrative framework.

It is important to realize that most of the resources that sustained Monte Albán probably had to be mobilized from the agricultural villages on the valley floor (Kowalewski 1980). Funding the growth of Monte Albán would have required a significant increase in the surplus mobilized by the chiefly political economy in the valley, and the increased labor requirements of such growth policies may have fostered population increase among the primary producers of the system (Blanton et al.

1981:71). These demographic consequences would have been most strongly felt within the spatial bounds of chiefly regulatory efficacy; in the Oaxaca Valley, I have calculated that a domain with a radius of a half-day of travel would reach about 28 km from Monte Albán (Spencer 1982:23). The regional survey data presented in Blanton et al. (1979, 1981) are entirely consistent with these expectations. Valley floor population increased by a factor of about 2.8 between Rosario phase and Period Early I (Blanton et al. 1981:64,71). And, this increase was most pronounced within the postulated area of maximal chiefly regulatory efficacy.

Most of the [Period Early I] population increase occurred within 18 to 20 km of the capital. Beyond roughly 30 km from the site, growth was negligible (Blanton et al. 1979:377).

As we move from Period Early I to Period Late I (300–100 B.C.), this pattern of political growth continues. The population at Monte Albán more than tripled to about 17,000; the two Period Early I public buildings continued to be used in Late I, but they appear to have been enlarged somewhat, an indication perhaps of the greater amounts of *corvée* labor that the Monte Albán elite could command (Blanton et al. 1981:75–76). Outside Monte Albán, the political growth process had a demographic impact like that of Period Early I. There was a marked increase in the valley's population, especially in the territory within about 18 km from the capital (Blanton et al. 1981:76).

In a diachronic analysis of demography and agricultural resources in the Oaxaca Valley, Kowalewski (1980) calculated that by Period Late I there would have been several "hot spots" of localized population pressure in the valley, where the local inhabitants would have been unable to provide for their own sustenance during years of less than normal rainfall. Kowalewski (1980:163) noted that the areas manifesting localized population pressure were largely those in the vicinity of Monte Albán, and thus were probably important suppliers of surplus to the capital. Obviously, if the farmers in these locales were finding it difficult to feed themselves by Period Late I, they would not have been able to produce much of a surplus to support the inhabitants of Monte Albán.

It appears that by Period Late I the Oaxaca regional system was approaching the operational limits of a chiefly political economy. Within the area of maximal regulatory efficacy, political growth had brought about such an increase in population that the ability of the system to support the regional decision-making center was surely threatened. Faced with a strained political economy, the Zapotec elite would have had to implement some new strategy capable of generating additional revenues or else continue with the existing regulatory strategies and suffer the consequences. One auspicious strategy might have been to begin a strategy of

territorial conquest and tribute exaction in inhabited areas beyond the zone already incorporated into the chiefly political economy (Carneiro 1970; Webster 1975). Since most of the population of the Oaxaca Valley by Period Late I was already concentrated within this zone, such a strategy would have been most likely directed primarily at other valleys in the southern highlands, some of them resource-rich and yet not densely inhabited.

It turns out that Oaxaca scholars have long suspected that the Zapotec began a conquest strategy at about this time. On Mound J, an arrowhead-shaped public building constructed at Monte Albán in Period II (100 B.C.–200 A.D.), there are inscriptions that Caso (1947), Marcus (1980), and others have suggested signified territorial conquests. Supporting evidence for this interpretation was collected by Elsa Redmond and the present author in the Cañada de Cuicatlán, a narrow canyon lying between the Oaxaca Valley and the Tehuacán Valley to the north (Redmond 1983; Spencer 1982; Redmond and Spencer 1982, 1983).

The Cañada was almost certainly not the only region conquered by the Zapotec; there are some 40 conquest slabs on Mound J at Monte Albán. In order to carry out the conquests and maintain long-term control over distant tributary regions (the Cañada, for example, lies some 100 km from Monte Albán) it seems clear that a full-time army and a staff of frontier administrators would have been required. The Zapotec administration would have had to develop internal administrative specialization and the concomitant capacity to delegate authority effectively. Although these administrative practices are considerably more expensive to maintain than simple centralized decision making, the exaction of tribute in conquered regions would have helped to defray the costs of the regulatory transformation. This reconstruction leads us expect to find evidence for the growth at this time of a specialized military organization, along with the emergence of internal differentiation in the central administration of the Zapotec. Both of these developments seem to be quite well established by Period II.

It was probably at the interface between Late I and II that massive defensive walls were constructed around the base of Monte Albán (Blanton 1978:52–54). The conquest inscriptions, of course, also date to Period II, as do a new series of anthropomorphic urns, usually representing males (Bernal 1965:801). The attire of these figures is similar to the protohistoric Zapotec military costumes described by the early Spanish chroniclers Burgoa and Córdova, and Redmond asserts that some of the Period II urns surely depict warriors (1983:171–176). Burgoa also recorded that warriors who had shown bravery on the battlefield were inducted into a special military order that had the jaguar as its symbol or totem (Redmond 1983:27). In this light, it is notable that Period II is when

the jaguar became an increasingly important figure in Zapotec iconography (Caso and Bernal 1952:55). These lines of evidence would seem to point to the rise of the military arm of Zapotec administration by Period II. The expanding military organization was probably staffed, in part, by Zapotecs who lived at or near Monte Albán in the central part of valley. Blanton et al. (1979:379) point out that in Period II there was a moderate population decline not just at Monte Albán, but especially among valley-floor communities near the city, in precisely the area that had been experiencing localized overpopulation problems in preceding Period Late I. By inducing some the area's inhabitants to march off to war, the Zapotec administration may have been able to resolve the situation somewhat.

The conquest strategy, however, had consequences that went far beyond this. Its successful implementation both demanded and permitted a dramatic diversification of Zapotec central administration. For nearly a thousand years, chiefly organization had prevailed in the Oaxaca Valley, and the largest center at any point in time had contained only a couple of public buildings (Flannery and Marcus 1976:211–216). It is thus highly significant that, between Period I and Period II, there rather suddenly appeared “a whole series of clearly recognizable and functionally distinct public buildings” (Flannery and Marcus 1976:217). Included among these were two-room temple structures, arrowhead-shaped buildings of probable military significance, a host of pyramids and platforms of diverse morphology, and ballcourts. It was in Period II that the Main Plaza of Monte Albán was formally laid out, an enormous undertaking that involved the leveling of great rock outcrops and the filling-in of deep crevices (Acosta 1965:817–824). Public buildings were constructed on all sides as well as in the center of the Main Plaza. Although no scholar has yet stated precisely how many public buildings were constructed at Monte Albán in Period II, a reasonable estimate—based on the information in Acosta (1965), Caso et al. (1967), Blanton (1978), and Flannery and Marcus (1976)—would be approximately two dozen. If we contrast the abundance and variety of public architecture in Period II with that of Period I, and indeed of earlier periods, it seems clear that the existence of an internally specialized administration is indicated by Period II. State emergence must have occurred near the end of Period Late I or at the interface between Period Late I and Period II (Flannery and Marcus 1976:221; Spencer 1982:251; Wright 1986:346). Thus, in the Oaxaca case, the state emerged over a relatively short period of time and in so doing represented a punctuational change in the Zapotec administrative organization.

The Teotihuacan State

Sanders (1981:165) has characterized the years between 900 and 100

B.C. in the Basin of Mexico as time of population growth and centralization of power. By First Intermediate 3 (300–100 B.C.), the total population of the basin had increased to about 140,000. At this time, there were apparently two large, competing political systems in the basin, one centered on Cuicuilco, the other on Teotihuacan, some 60 km apart along the lakeshore. Sanders suggests that Cuicuilco was the capital of a paramount chiefdom during First Intermediate 3 (1981:174). He says that the site had a population of about 20,000 distributed over 400 ha, although Sanders et al. (1979:99) have suggested that it may have been somewhat larger. They also have noted that the “monumentality of its public architecture was without parallel in the entire Basin of Mexico, and only Teotihuacan equaled or exceeded it in size and population” (1979:99). Teotihuacan in First Intermediate 3 is believed to have covered some 600 to 800 ha, with an estimated population of 20,000 to 40,000 people (Sanders et al. 1979:101). The precise nature of First Intermediate 3 public architecture at Teotihuacan is unclear because of later construction activities, but at Cuicuilco public architecture at this time apparently consisted of a single large pyramid, round in plan view, with a diameter of 80 m and a height of 20 m. Although streets and houses have been found near this impressive structure, no other pyramids have been located (Sanders et al. 1979:100; Sanders 1981:174); this would, of course, be consistent with Sanders’ interpretation of Cuicuilco as a paramount chiefly center.

There is evidence that the relations between Teotihuacan and Cuicuilco were less than amicable. Approximately half-way between the two large centers, just east of the Ixtapalapa peninsula, is an area devoid of sites that Sanders et al. (1979:Map 23) call a “no man’s land.” Atop some of the peninsula’s hills, Blanton found a series of First Intermediate 3 sites in defensive locations. He concluded that the peninsula lay along a contested boundary between the two competing systems (Blanton et al. 1981:128). It is significant that this no man’s land lies at a distance of about 31 km along the lakeshore from Teotihuacan and 30 km from Cuicuilco. These figures are strikingly close to the 28-km radius that I proposed would define the territory of optimal chiefly regulatory efficacy in my discussion of the Oaxaca Valley. Unlike the smaller Oaxaca Valley, however, where a single chiefly system underwent a cycle of political growth in the centuries before 100 B.C., in the Basin of Mexico there were two adjacent chiefdoms, both experiencing impressive rates of growth.

Yet, as we saw in Oaxaca, there are indications that this growth process was beginning to approach the operational limits of a chiefly political economy during First Intermediate 3. Sanders et al. calculated carrying capacity estimates for the basin during this time period, which they then compared to population estimates based on their surveys (1979:Map 23).

Although their calculations indicate that there would have been no general condition of population pressure in the basin as a whole at this time, their analysis does reveal the existence of several "hot spots" of localized population pressure within the domains of both Teotihuacan and Cuicuilco. Indeed, much of the territory in the vicinity of each center had become populated to such an extent that the carrying capacity of the local terrain was being impinged upon (1979:Map 23).

Brumfiel's catchment analysis (1976) came to similar conclusions. She found that population pressure in the eastern Basin of Mexico became more prevalent between First Intermediate 2 and First Intermediate 3, and she attributed this to increased demands for mobilized surplus to sustain the large centers in the basin. Thus, as in Oaxaca, population seems to have increased as part of the political growth process until it began to press upon the productive regime. Whether or not one agrees with all the details of Brumfiel's calculations, or those of Sanders et al., one can reasonably conclude that population in the domains of both Cuicuilco and Teotihuacan had grown to the point where the margin for surplus production would surely have been narrowing by First Intermediate 3, making it increasingly difficult to generate the revenues necessary to support the regional centers.

At the end of First Intermediate 3, precisely at this critical point in the basin's political history, a most remarkable event occurred. The volcano Xitle, overlooking Cuicuilco, erupted. Lava came coursing down the slopes and covered much of the area around the large center. This land, once the most fertile in the entire basin, was suddenly turned into a virtual wasteland (Sanders et al. 1979:106). Another lava flow, at the end of First Intermediate 5 (roughly 300 A.D.) completely covered the site and its surroundings, but it is clear that, after the first eruption, Cuicuilco was never more than a small and politically marginal community (Sanders et al. 1979:106-107).

First Intermediate 4 (100 B.C.-100 A.D.) begins just after Cuicuilco is removed from the political scene. Sanders et al. observe: "This phase witnessed the most revolutionary change in the life style of the population of the Basin of Mexico since its initial colonization by sedentary farmers 1400 years earlier" (1979:105). Teotihuacan was transformed into an urban center of extraordinary size and complexity. The population of the city grew precipitously to about 80,000 (Millon 1981:221). The city remained the largest settlement in the basin for at least 500 years and attained a maximum size during the Middle Horizon (200-700 A.D.) of 125,000 to 200,000 persons (Millon 1981:208). The administrative organization at Teotihuacan must have been highly specialized internally, for over 75 public buildings have been found at the site (Millon 1981:203). Although the sequence of construction has not yet been determined for all

these buildings, excavations have revealed that an astonishingly large amount of public building construction took place over a fairly short period of time during First Intermediate 4; at this time, the city's great central avenue was laid out and at least 20 temple complexes were built, along with the two largest pyramids here, the Sun Pyramid and the Moon Pyramid (Millon 1973:52, 1981:231). The construction activities of First Intermediate 4 represent a stunning increase in the amount and variety of public buildings at Teotihuacan. Surely, this diversified architectural array signals the rise of an internally specialized central administration. With the emergence of the Teotihuacan state, various new economic and social policies were implemented, including the elaboration of large-scale craft specialization and concomitant market exchange, the reorganization of rural settlement and production, and the establishment of large apartment compounds as the fundamental unit of urban residence (Millon 1976, 1981). In the case of Teotihuacan the emergence of the state represented—as it did in Oaxaca—a relatively rapid, transformational change in administrative organization.

Yet, the two states were also quite different. While the Monte Albán administration had a definite military component from the very inception of the state, Millon has suggested that the military was not an important force at Teotihuacan until fairly late, perhaps not until 400–500 A.D., when the Teotihuacanos apparently became involved in interregional conquest activities (1976:239–240). He notes that figures in military costume do not occur in murals, on pottery, or in the form of figurines until toward the end of the Middle Horizon (1976:239–240). Many of the public buildings in the city, Millon feels, were temples of various kinds; he suggests that a large part of Teotihuacan's administration was composed of a specialized priesthood and that religion permeated politics: "The Teotihuacan polity was undoubtedly sacralized" (1976:238). While the discovery of a subterranean shrine beneath the Pyramid of the Sun indicates that the spot had likely been religiously important for some time (Millon 1981:231–235), I also suggest that the terrible and swift elimination of Cuicuilco as a political force at the end of First Intermediate 3 goes a long way toward explaining the religious nature of the Teotihuacan state, especially in its early years. A large army was simply not required to integrate the basin after the volcano had done its work. Lest anyone think that I am invoking simple catastrophism here, allow me to say that the eruption of Xitle was a geological–historical event ripe with potential for political and religious manipulation, and I propose that the leaders of Teotihuacan took full advantage of it to establish their control over the basin as a whole.

CONCLUSION

In the opening quotation, Renfrew laid out two alternative paths to

archaeological explanation. I have tried to conjoin these routes by presenting a revised neoevolutionism that grants fundamental roles to both homology and analogy. It recognizes history's substantial contribution in generating the contextual basis of behavioral variation, while at the same time it acknowledges the importance of analogy when we are seeking answers to questions concerning function and development.

Our two archaeological cases of state formation cannot be fully understood without considering the specific, perhaps unique, historical and environmental factors that helped to create the selective context of each development. In the case of Monte Albán, a significant condition was the existence, in Late Formative times, of a series of lightly populated but fertile valleys and canyons surrounding the Oaxaca Valley—tempting prey for a Zapotec leadership bent on using territorial conquest to solve its own political economic problems. In the Basin of Mexico, a historical event of considerable importance was surely the volcanic snuffing-out of Teotihuacan's greatest competitor at precisely the time when chiefly political growth was breeding strain and instability.

But homology should not be stressed to the neglect of analogy; in both examples, state emergence involved a process of internal differentiation of central authority that came about at a relatively rapid pace. These archaeological cases, like the ethnohistorical ones discussed earlier, are consistent with a transformationalist view of state development, which suggests that we should look with renewed interest at the stepwise frameworks of neoevolutionism. The neoevolutionist perspective in anthropology, I would argue, is neither dead nor seriously ailing; with appropriate modifications it can continue to enhance our understanding of the development of complex human societies.

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